

Learning the patient – centered approach: evaluation of a simulation session by role-play for the students of the Faculty of Medicine of Sfax

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Abstract ;

We aimed to evaluate the satisfaction of the students of medicine of a session of simulation by role-play having as theme “patient centered approach”. We used a self-administered satisfaction questionnaire. Among 221 students, 94.1% qualified the quality of the session as satisfactory: the time allocated to the session (87.8%), the trainers (84.7%), the group size (89.6%) and the general atmosphere (88.2%). They declared that this session helped them to make connections with their previous knowledge (81.5%) and that it completed the practice in internship (83.2%). Our results showed the interest of integrating role-play into the medical education, at least at the end of the first cycle of medical studies. However, improvements of the educational system can be considered.

Article info

Received

January 23,2023

Accepted

May 26,2023

Keyword:

- ✓ Patient-centered approach
- ✓ Medical studies
- ✓ Role-play
- ✓ Satisfaction

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1. Introduction

As part of the reform of medical studies in Tunisia and with the emergence of active pedagogy methods, where the learner undertakes an active learning acquisition start, the use of simulation is now favored for the training of future doctors. Indeed, this learning strategy showed not only its effectiveness but also a benefit on the quality of care subsequently provided to the patient [1, 2]. The place of simulation by role-play is part of the evolution of teaching methods used in teaching medicine. It makes it possible to address questions related to the complexity and evolution of the doctor-patient relationship. Thus, and following the observation of the insufficient place given to learning the doctor-patient relationship at the Faculty of Medicine of Sfax, a fundamental teaching unit was set up from the 2018 -2019 academic year for the students of the second year of the first cycle of medical studies. That was, « the initiation to medical practice » (IMP) unit based on learning through role-play.

Indeed, it is established that training doctors in the relational dimension of care has an influence on their behavior and improves their professional communication [3]. Role-play used as a learning strategy is considered the technique of choice that will allow contextualizing knowledge in the relational field to lead to the acquisition of skill. All simulation training activity needs an evaluation to validate the educational process and show the acquisition of the targeted skill [4]. The evaluation of these trainings is classically carried out with the

classification of Kirkpatrick [5]. This classification includes four levels of training : satisfaction, knowledge contribution, change in practice and clinical results.

In this study, we have attempted to assess the satisfaction of students in the second year medical studies of a simulation session by role-play as part of the IMP unit and having the patient-centered approach as theme.

2. Subjects and methods

2.1 Study population

It was a cross-sectional and descriptive study. It took place at the simulation center of the Faculty of Medicine of Sfax. It targeted all students enrolled in the second year medical studies and who attended simulation sessions having as theme « patient-centered approach ». The students who were absent during the simulation session were excluded.

2.2 Description of the evaluated simulation session

Learning about « the patient-centered approach » theme was done in groups during a two-hour simulation session led by a university hospital psychiatrist and endocrinologist.

This session was made up of role-play performed by the students themselves. The scenarios of the role-play with their observation grids were developed by the trainers according to a pre-established prototype health simulation scenarios, validated and approved by simulation trainers [6]. During each role-playing

session, the overall educational objective was to establish a caring relationship as part of patient-centered approach. They proposed the experiential exploration of relational situation with diabetic patients. The same scenarios were proposed for the eighth group of students.

2.3 Assessment tool

At the end of the session, the students were asked to answer a self-administered and validated satisfaction questionnaire. This questionnaire includes a first part in the form of 31 items Likert scale divided into five areas (organization, scientific interest, educational value, progress of the session, general appreciation) and a second part in the form of open-questions exploring the emotional experience of participants and their suggestions.

2.3 Statistical analysis

The data entry and analysis were done using the statistical package for the Social Sciences SPSS in its 20th version.

The analysis was descriptive and includes quantitative variables expressed as a percentage.

3. Results

3.1 Number of participants

Among the 252 students enrolled in the second year medical studies, 221 attended eight simulation sessions on

the patient-centered approach. These latter were included in our study. They all agreed to complete the satisfaction questionnaire. The participation rate was there 100%.

3.2 Overall satisfaction rating

In the five areas to assess, the rate of students who « somewhat agreed » or « strongly agreed » was 88% for the organization, 86.3% for the scientific interest, 92% for the educational value, 90% for the progress of the session and 91.4% for the general appreciation.

3.3 Assessment of the areas of the questionnaire

The results of the evaluation of the fields of the organization, of the scientific interest, of the educational value of the session and of the general appreciation are presented in table 1.

We did not record responses to item “the provided documents are relevant” since no document was provided to the students during the session.

3.4 Collection of expectations data

One hundred fourteen students responded to item related to expectations before the simulation session. The two main expectations were to better understand what is a patient-centered approach (n=35; 30.7%) and to develop their communication skills (n=28; 24.6%) (Table 2).

Table 1. Assessment results of the evaluation of the domains of the questionnaire expressed in number of students and in percentage

	Strongly disagree/ disagree	Agree/ strongly agree
Organization		
The duration of the session is adapted to the content	27 (12.2%)	194 (87.8%)
The distribution of time between the different phases of the simulation session was relevant	34 (15,4%)	187 (84,7%)
The trainers were available	12 (5.4%)	209 (94.6%)
Group size was adequate	23 (10.4%)	198 (89.6%)
The general atmosphere was suitable to learning	26 (11.8%)	195 (88.2%)
Scientific interest		
The theme of the session was relevant	21 (9.5%)	200 (90.5%)
The choice of the trainers was in line with the scientific content	22 (9.9%)	199 (90%)
The session helped me to make connections with my previously acquired theoretical knowledge	41(18.6%)	180 (81.5%)
The session complete the practice in the intership	37 (16,7%)	184 (83,2%)
Educational value		
The session was interactive	27 (12.3%)	194 (87.8%)
The situation proposed was close to reality	15 (6.8%)	206 (93.2%)
The documents provided were relevant *	-	-
Course of the session		
Welcoming participants by the trainers was caring	10 (4.6%)	211(95.5%)
The briefing assured me	27 (12.3%)	194 (87.8%)
The explanations were clear enough	13 (5.9%)	208(94.1%)
The time allocated to the briefing has been adapted	38 (17.2%)	183 (82.8%)
During the briefing, all these elements has been addressed : simulation interest, ethical principales, the objectives of the session and the distribution of the roles of each	29 (13.1%)	192 (68.8%)
The time allocatd to the simulation itself is adapted	29 (13.1)	192 (86.8%)
The time allocatd to the debriefing is adapted	33 (15%)	188 (85%)
During the debriefing, the actos can express their feelings	48 (21.7%)	173 (78.3%)
The allocation of speaking time for each was fair	36 (16.3%)	185 (83.8%)
There was no judgement during the debriefing	1 (0.5%)	220 (99.5%)
I had the opportunity to reflect and discuss my performance during the debriefing (for the one who participated in role play)	-	32(100%)
If necessary, the trainers offered me clues which allowed me to progress in my reflection	19 (8.6%)	202 (91.4%)
The trainers provided constructive criticism during the debriefing	12 (5.5%)	209 (94.5%)
The trainer summerized important issues during debriefing	12 (5.5%)	209 (94.5%)
During the debriefing, the observation grid was used*	-	-
General appreciation		
The overall quality of the session is satisfactory	13 (5.9%)	208 (94.1%)
The session helped me update my knowledge	32 (14.5%)	189 (85.5%)

The session helped me to progress in my reasoning	21 (9.5%)	200(90.5%)
The session can improve my future professional practice	9(4.1%)	212 (95.9%)

*No response to this item

Table 2. Results of the evaluation of expectations before the simulation session expressed in number of students and in percentage

Expectations	Number	% (total 114)
Understand the patient-centered approach	35	30.7
Caring for difficult patient	3	2.6
Follow a process to stay patient-centered	25	21.9
Develop my communication skills	28	24.6
Establish a good doctor-patient relationship	23	20.2

Table 3. Results of the evaluation of concerns before the simulation session expressed in number of students and percentage

Fears	Number	% (total 56)
Express my ideas and my point of view in front of the group	9	16.1
Being judged by the trainers and/or the learners	8	14.3
Repeat what has already been done in the other sessions of initiation to medical practice	2	3.6
Having difficulty playing the role	19	33.9
Avoir une séance ennuyeuse	11	19.6
Being designated to play the role	7	12.5

3.5 Collection of concerns data

Fifty six students (25.3%) specified what their concerns were before the simulation session.

The most frequently noted concerns were having difficulties playing the role (n=19; 33.9%) and to have a boring session (n=11 ; 19.6%) (Table 3).

3.5 Collection of strengths and areas for improvement

One hundred fifty four students (69.6%) specified the strong points of the simulation session. The two most frequently cited strength were the briefing and the feedback from the trainers (n=60 ; 38.9%) and the interactivity of the session (n=46 ; 29.8%) (Table 4).

Eighty students (36.1%) made suggestions to improve certain points of the simulation session (Table 4).

3.6 Comments

Thirty-seven students (16.7%) left comments at the end of the satisfaction questionnaire ; they are presented in table 5.

4. Discussion

In the present study, we are inspired by Donald Kirkpatrick model [5] used and recommended by the French National Authority for Health to assess the first level which is student satisfaction after a simulation session. Our results show an overall impression of student satisfaction with the practical and theoretical reports of the session as well as its organization. In fact, in the area of general appreciation, 94% of students qualify the overall quality of the session as satisfactory. The vast majority of them estimated to have acquired knowledge and 85.5% declared that the session enabled them to update their Knowledge, and know

how to be during this session of role-play.

As for the organization, the students were mostly satisfied with the allotted time per session (87.8%), the trainers (84.7%), the size of the group (89.6 %) and the general atmosphere of the session (88.2%).

There were, however, a few students who proposed to reduce the duration of the session (n : 3 ; 8.1%) and/or the group size (n : 2 ; 2.5%).

It is true that in a group made up of about thirty more, it was not easy for the trainers to control them all. For the students who attended the session as observers, they were involved in the debriefing. But for organizational reasons, it seemed difficult to ensure the simulation sessions for more than eight groups of students because of the cost in terms of human and material resources. There were students who did not appreciate redundancy, although it could be educational, of certain concepts, especially over the sessions of the IMP unit.

Table 4. Evaluation results of the strengths and areas to ameliorate of the simulation session expressed in number of students and in percentage

	Number	%
Strengths		
Session interactivity	46/154	29.8
Role play	26/154	16.8
Debriefing and feed-back of trainers	60/154	38.9
Criticism without judgement	11/154	7.1
Caring trainers who listen	11/154	7.1
Points to improve		
Better explain the role of each participant in role- play	10/80	12.5
Vary the goals of the role play	2/80	2.5

Engage all learners during discussion time	12/80	15
Increase the number of role play	16/80	20
Avoid repeating what was said during the other sessions	8/80	10
Vary the choice of clinical situations	11/80	13.7
Better allocate time (briefing/ role-play/debriefing)	11/80	13.7
Demonstration of role play by the trainers	5/80	6.25
Reduce group size	2/80	2.5
Having a background knowledge on diseases and treatments	3/80	3.7

Table 5. Results of free comments expressed in number of students and in percentage

Comments	Number	% (total 37)
Very interesting session	29	78.3
Good attitude and welcoming from the trainers	3	8.1
Having more psychiatrist trainers	1	2.7
What is done is utopian	1	2.7
Reduce the duration of the session	3	8.1

And they pointed it out in the points for improvement (n : 8 ; 10%).

This study permitted to identify the scientific interest of the session. In deed, the vast majority of students (90.5%) judged the theme of the session as relevant. They also made it understand through expressed expectations. They were curious to understand such an approach (n : 35 ; 30.7%) and to learn the process to stay centered on the patient (n : 25 ; 21.9%). In this regard, the results obtained allow us to say that the students realized that having diagnostic and therapeutic skills alone is not enough. They expressed interest in learning communication skills (n : 28 ; 24.6%). Recalling that the patient-centered approach developed by Stewart and al. [8] is defined as an approach intended to deliver care that is respectful and sensitive

to the patient's individual references, adapted to his needs and his values.

This definition, developed especially in hospital environment, announces an ethical scope and the necessary skill to explore lived experience. With this approach we aspire to a change in the classic paternalistic posture of the doctor. Students are no longer called to conduct a standardized interview on all known socio-economic and biomedical components. Hence, we prefer to teach them to conduct a comprehensive interview in which empathy will allow the patient's verbalization. The training of future doctors must allow, for this purpose, to develop interview skills in the exploration of the lived experience of the disease, in a patient-centered approach respecting the person and leading to ethic-respecting care attitudes [9].

The students stated that the simulation session helped them to make connections with their previously acquired theoretical knowledge (81.5%) and that it completed the internship practice (83.2%). Hence, role playing served the contextualization of knowledge in the area of relationships.

These results suggest that there have been changes in the students, able to testify to the acquisition of new knowledge leading to the integration of the various acquisitions in order to achieve competence. Hence the importance of IMP sessions at the beginning of the internship to facilitate the student's approach to patients and to encourage them to experiment with their communication skills.

As to the educational value dimension, the majority of students (87.8%) agreed that the session was interactive and this was noted as a high light of the session by 46 students (29.8%). In general, students prefer this active teaching approach to passive lectures. Indeed, the role-playing is a learning strategy that ensure the implementation of the learner and the interactive group work. It therefore, promotes learning permitting a co-construction of knowledge.

The situations proposed during the role-playing were close to reality ; that's what most students think (93.2%). Simulation in a context resembling reality makes it possible to take a bridge between theory and the care environment. This is essential to arouse student's attention and reflection and it

is especially important for relationship training which, when it moves away from concrete experience, regularly arouse resistance in the students [10].

The two situations proposed during the session aimed to establish relationship of care centered on the patient with type 2 diabetes. The choice wasn't arbitrary. In fact, the endocrinologist trainers listed relational situations frequently encountered in diabetology consultation, relying on their clinical experience. But students reported that it would be interesting to vary the objectives of role-playing (n : 2 ; 2.5%) and the choice of clinical situations (n : 11 ; 13.7%).

On this point, it would be noted that the trainers tried, thank to a recontextualization work made during debriefing, to discuss as many different situations belonging to the same family situations in order to promote the transfer of learning.

Certainly, the patient-centered approach should be the organizing principle underpinning the care of any person suffering from any chronic disease. But gives the uncertainties in terms of choice and of therapeutic sequence, patient-centered care remains particularly appropriate for type 2 diabetes. In addition, in this disease, it is the patients who make the final decisions about their life style and, to some extent, the drugs they use [11]. These reasons motivated the choice of certain measures. Moreover, the trainers noticed that through the two situations simulated having an identical theme,

the students were nevertheless able to tackle such different issues rather than reduce glycated hemoglobin in unbalanced diabetic patients and to explore their expectations, their representations and the obstacles that prevent them from moving forward.

The practical course of simulation session includes when the trainers first explain the role-playing technique to the participants, its objective and the proposed scenario for the doctor. They showed them that it is not an assessment of the medical skills; neither the theatrical abilities and guaranteed the confidentiality of the session. In our study, the vast majority of students (94.1%) declared concerning the dimension “course of the session”, that the given explications during the briefing were clear enough. However, there were some students who found that the time given to the briefing was not sufficient (17.2%), and that these elements (the interest of the simulation, the ethical principles, the objectives of the session, role distribution of each have not all been addressed (13.1%). In the same way, other students (n=10; 12.5%) think that the explanations given concerning the role of each participant in the role-playing was insufficient and that it was necessary to ameliorate this point later. For this, it would be wise to devote more time to the briefing to clarify more for the students who are new to simulation, all the essential points for the smooth running of the role playing. It would be convenient to remind the students that the patient scenario should

not be clarified for the observers before the role-playing. Indeed, during the session, who ever volunteer to play the role of the patient quits the room with one of the trainers and he is taken aside to explain the scenario of his role.

During the debriefing, there is an exploitation of the game which took place just before. The animators first question the actors on how they experienced the situation and what they think about it. The floor was then given to students who observed the role-play. Overall, the perception of the debriefing was favorable in our study. The majority of the students indicated that the time allocated to debriefing was appropriate (85%) that it permits to the actors to express themselves on their feeling (78.3%) with an equitable distribution of speaking time for everyone (83.8%).

As part of the simulation, the role of the trainer is crucial because the more the participants feel involved during the debriefing, the more the learning from the simulation exercise will be clarified, consolidated and transferred into practice [12]. It is then important that the professor be trained in the role of accompaniment in order to properly guide the student in the reflective thinking. This debriefing context should be very favorable to the development of clinical judgement in the student. In our study, 91.4% agreed that the trainers offered clues that allowed the student to progress in his thinking and 94.6% agreed that the trainers summarized the important

issues during the debriefing. Concerning the errors during the role-playing to which the student is entitled, 94.6% agreed that the trainer provided constructive criticism during the debriefing. Such reviews will allow participants to consolidate their learning.

In order to maximize the impact of the analytical phase of the debriefing, the trainers prepare in advance a list of principles that the model conveyed by the role-play illustrates. By letting participants themselves pick up a certain number and filling in what might have been overlooked, trainers ensure they cover the material while allowing learners to contribute to the discussion from their own perception [12].

Students did not respond to item “during the debriefing, the observation guide was used” because the guide was only available to the trainer to guide the debriefing. Sixty students (38.9%) also considered that the debriefing and the feedback from the trainers were the strength of the simulation. Indeed, the debriefing represents an essential step, which brings the participant to a reflexive approach on the reasoning of the origin of his actions.

Another positive element was the lack of judgement during debriefing expressed by almost all of the students (99.5%). In this regard, it should be remembered that the trainers could miss the debriefing if it is going to focus on the errors committed by the students during the role-play, whether he will

blame or ridicule the students. In fact, it is difficult for the latter to confront their error in simulation and they can consequently show anxiety and experience a feeling of intimidation. For this, the trainer should help strengthen them in order to develop their sense of self-efficacy in the targeted skill [13].

Among the most cited expectations of the students were that of developing their communication skills (24.6%) and establishing a good doctor-patient relationship (20.2%). This means that this simulation session like other IMP sessions, was adequate with the personal needs of the students. The latter, and particularly those who participated in the role-play, could experiment during the session different communication techniques. Indeed, the doctor-patient relationship is a fundamental element of care in medicine, it belongs to the affective domain of learning. Previously, training in the doctor-patient relationship was not part of a well-structured teaching program. Currently, with the diversity of pedagogical approaches and learning strategies offered by the Faculty of Medicine of Sfax, the relationship training is a priority integrated into the IMP unit.

Some students had fears before the simulation session about speaking in front of the group and been judged by the trainers and/or the learners. This translates the limits of the role-play as a learning strategy for the shy students, formateurs et/ou les apprenants. The most shy expressions were

subsequently facilitated by the interactivity of the session and the attitude of non-judgement from the trainers; two characteristics perceived by the students.

The main limitations to learning mentioned by the students were the lack of explanations of the role of each participant in the role-play (12.5%), the redundancy of certain concepts through the sessions (10%) and the absence of previous knowledge on pathology and pharmacology (3.7%). Since second year, the students of the first cycle of medical studies are not yet familiar with this new learning strategy, the necessary prior time understanding the rules and the starting of the role-play seems to be more or less long. It is then necessary to reassure the students during the briefing by specifying to them that the clinical situation is far from being a moment of evaluation of the theoretical knowledge on the disease and its treatment.

About redundancy recalling that the skill is deployed in given context that requires the mobilization and the combination of a set of resources within a family of situations [14]. To target the same skill, the trainers of different themes of the IMP unit offered various situations belonging to a family of similar situations. In order to harmonize the educational content, it would be useful to organize regular meetings with the trainers in order to create a base on which the trainers could rely on to standardize the messages to be transmitted during

decontextualization and contextualization, and thus guarantee a better transfer of learning.

By referring to the remarks that were made by the students at the level of the heading “points to be improved” and “free comments”, we can identify some tracks of reflection and perspectives:

- The role-play requires a good upstream and downstream supervision of the experiment. The time needed before hand, to present the objectives, the clinical situation and to explain the rules of the role-play must be enough. The presentation of the two actors who will play the role of the patient and that of the doctor is certainly required. They have to learn the role and recognize its characteristics. But, it would be wise to point out to them that improvisation is also part of it. Also downstream, there is the risk that some learners will be too embarrassed to participate effectively. This point depends on the teacher's ability to animate and gain the confidence of the learners. For this, prior training in simulation is necessary for all IMP unit teachers.

- The students involved in the study asked for a prerequisite on the diseases and the treatments mentioned in the scenarios. Given that they have not yet had courses on pathologies and therapeutics, they were afraid of declarative or theoretical knowledge which served as reference or shoring to help them deal with the problem. Regarding the Faculty of Medicine of Sfax, the choice of the second year students of the first cycle of the medical

studies for teaching IMP was reflective. In fact, researchers in medical pedagogy have suggested offering an introduction to the doctor-patient relationship as early as possible in the medical studies. This is to say when the students have still their observation skills and a critical sense that they wish to see further developed [15]. This will prepare them for the internship field where there will be a transfer of learning.

-The impact of the lack of knowledge on the pathologies and therapeutic can be minimized by specifying to the students that the simulation session is more centered on the development of abilities in the field of the relationship doctor-patient and the communication rather than on the evaluation of theoretical knowledge. The objective is rather to learn how to face relational situations of care while identifying ways to address some typical communications barriers.

- They also suggested varying the choice of clinical situations. In training in the relationship doctor-patient, the singularity of each relational experience and the complexity of the process at work in the doctor-patient encounter have as corollary the impossibility of referral for the patient-doctor relationship to "standard models" of behavior to be adopted by all [4]. Hence the importance of varying the learning situations and increasing as much as possible the scope of the work of reflection thanks to a recontextualization during the analytical phase of debriefing.

On the other hand, we believe that their proposal to have a demonstration of the role-play by the trainers is not applicable. They will probably consider it as a normative demonstration, which will repress their creativity and their reasoning and problem-solving skills. It is not about learning how to behave but rather a questioning of the ways of reaction of each student in order to identify the limits and support the potentialities.

This study has certain limitations that should be noted. First, the student's responses could be influenced by an acquiescence bias given that the teachers were also researchers. The students knew that the program managers could become aware of the answers, despite the anonymous nature of the questionnaires. In order to minimize this bias, we explained to the students that their answers would have no impact on them and that its sole objective was to evaluate the teaching activity with a view to improving it. Secondly, the feeling of the students can also be biased by confounding factors such as teaching methods of different trainers, the content load of the session, the locals, etc. Third, the interest of this evaluation is also limited by the fact that it is only a subjective measurement of their perception and not an objective measurement of the effectiveness of that training session with regard to the acquisition of knowledge and skills.

5. CONCLUSION

We have raised an overall positive rate of satisfaction (organization, scientific interest, educational value, course of the session, general appreciation). The percentage of students satisfied with the simulation session was over 80% for all items. First of all, the satisfaction of the vast majority of students with this simulation session and the need to teach the doctor-patient relationship constitute strong arguments for integrating the role-play into the medical studies, especially at the end of the first cycle of medical studies. And even such an evaluation does not make it possible to measure the effectiveness of teaching in terms of the acquisition of relational care skills, it makes it possible to appreciate the interest that all the students find in this teaching, its degree of concordance with their expectations and its feasibility.

The benefits made by this teaching should be supplemented by the reinforcement of the quality of the training in the internship locations to bring about a change in the relational behavior of students. Furthermore, improvements in the pedagogic tools can be considered, particularly at the level of the clinical situations to be offered, of the briefing, and the debriefing animation. Finally, this study represents the first step in an evaluation process for simulation session. It would be wise to complete the evaluation of the effectiveness of communication training in transferring skills to clinical

practice by that of its impact in professional practice. This requires the development of rigorous methodology, in particular longitudinal randomized studies.

Acknowledgements

We would like to thank the associate professors in endocrinology Dr. Faten HAJ KACEM and Dr. Mouna ELLEUCH for contributing to the animation of training sessions on the patient-centered approach.

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